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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,618	12/15/2000	Mark A. Henninger	00-416	2172

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CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER
HAMILTON, LALITA M

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/738,618	HENNINGER ET AL.	
	Examin r	Art Unit	
	Lalita M Hamilton	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected for insufficient antecedent basis for the following limitations in the following claims:

Claim 1 recites "amount" and "bond valuations".

Claim 9 recites "amount", "swap maturity", "swap yield", and "bond yield".

Claim 10 recites "swap maturity schedule" and "term".

Claim 11 recites "swap maturity".

Claim 15 recites "amount", "swap maturity", "swap yield", "swap fixed interest rate", "predetermined period of time commercial paper interest rate", "bond yield", "bond maturity", "bond mark-to-market change", and "swap mark-to-market change".

Claim 16 recites "bond mark-to-market change", and "swap mark-to-market change".

The remaining claims are rejected for their dependency upon the above rejected claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein in view of HNG.

Falkenstein discloses a method for minimizing basis risk comprising hedging the amount of a bond against other securities, the amount of the bond hedged by other securities to change similarly with the mark-to market value of other securities to the mark-to-market value of the bond to the security mark-to-market value to the bond mark-to-market value by varying the ratio of the bond being to the security in each predetermined period of time to compensate for differences in security and the bond valuations **(p.2-3 and 7-11),** and the maturity of said security and the bond may be closely matched **(p.2-3 and 7-11)**. It is inherent that a lesser amount of the bond may be hedged by the security when the bond maturity is longer, since the longer the maturity, the more susceptible the security is to interest rate risk. However, Falkenstein does not disclose hedging the amount of the bond by a swap wherein the amount of the bond hedged by the swap varies during the life of the swap, an interest rate change that may having a similar dollar impact on the swap mark-to-market value and the bond mark-to-market value, or the ratio of the bond being hedged to the swap varying to maintain similar amounts of dollar value volatility as the maturity ratio of the bond to the swap changes. HNG teaches a financial strategy comprising hedging the amount of a security by a swap wherein the amount of the security hedged by the swap varies during the life of the swap **(p.2-4 and 6)**, an interest rate change that may having a similar dollar impact on the swap mark-to-market value and the security mark-to-market value **(2-4 and 6)**, and the ratio of the security being hedged to the swap varying to

maintain similar amounts of dollar value volatility as the maturity ratio of the security to the swap changes **(p.2-4 and 6)**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate hedging the amount of the security by a swap wherein the amount of the security hedged by the swap varies during the life of the swap, an interest rate change that may having a similar dollar impact on the swap mark-to-market value and the security mark-to-market value, and the ratio of the security being hedged to the swap varying to maintain similar amounts of dollar value volatility as the maturity ratio of the security to the swap changes, as taught by HNG into the method disclosed by Falkenstein, as an alternative financial instrument used in the hedging process.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein and HNG as applied to claim 1 above, and further in view of king (5,742,775).

Falkenstein discloses and HNG teaches the invention substantially as claimed; however, neither reference discloses nor teaches the method of compensatory ratio hedging being computer-implemented or a computer readable medium having computer-executable instructions for performing the steps in claim 1. King teaches a computer-implemented apparatus for creating a financial instrument **(col.5, line 59 to col.6, line 11; col.12, lines 5-33; and fig.1: 107)**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a computer-implemented apparatus, as taught by King into the method disclosed by Falkenstein and taught by HNG, to provide a computer readable medium capable of

carrying out instructions to perform the transactions and calculations.

Claims 9-11 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein in view of HNG and Interest Rate Swaps.

Falkenstein discloses a method for minimizing basis risk comprising identifying a bond being hedged by a security **(p.2-3 and 7-11)**; determining the amount of security being issued and using the same amount for the bond **(p.2-3 and 7-11)**; the compensatory hedge ratio is computed for each period of time of security maturity schedule, thereby varying the compensatory hedge ratio throughout the term of the security and between different securities to account for unique properties of the bond and security **(p.2-3 and 7-11)**; determining a period of time of the security maturity includes utilization of a hypothetical period **(p.2-3 and 7-11)**; using a compensatory hedge ratio **(p.2-3 and 7-11)**; (B) determining the amount of the security being issued and using same amount for bond **(p.2-3 and 7-11)**; and (C) determining a period of time of the security maturity **(p.2-3 and 7-11**). Falkenstein does not disclose calculating a present value of a one basis point change in said swap yield; calculating a present value of a one basis point change in said bond yield; calculating the compensatory hedge ratio by dividing (i) said present value of a one basis point change in said swap yield by (ii) said present value of a one basis point change in said bond yield; (D) calculating a present value of a basis point change in said swap yield by: (1) determining a projected profit of said swap for a predetermined period of time by calculating the difference between (i) said predetermined period of time commercial paper interest rate and (ii) said swap fixed interest rate, (2) computing a present value

of step (D)(1) using said swap fixed interest rate as a discount rate, (3) determining a projected profit of said swap for said predetermined period of time by calculating the difference between (i) said predetermined period of time commercial paper interest rate plus one basis point and (ii) said swap fixed interest rate, (4) computing a present value of step (D)(3) using said swap fixed interest rate as a discount rate, (5) computing said present value of said basis point change in said swap yield by calculating the difference between step (D)(4) and step (D)(2); (E) calculating a present value of a basis point change in said bond yield; (1) determining a period of time remaining in said bond maturity, (2) computing a present value of future interest and principal payments of said bond using an initial current yield to maturity as said discount rate, (3) computing a present value of said future interest and said principal payments of said bond using a sum of (i) said initial current yield to maturity and (ii) said basis point as said discount rate, (4) computing said present value of said basis point change in said bond yield by calculating the difference between step (E)(3) and step (E)(2); (F) calculating said compensatory hedge ratio in said predetermined period of time by dividing step (D) (5) by step (E)(4); (G) determining said ineffectiveness in said predetermined period of time by calculating the difference between (i) said bond mark-to-market change in said predetermined period of time, and (ii) said swap mark-to-market change in said predetermined period of time; or determining the effectiveness between said bond mark-to-market change in said predetermined period of time and said swap mark-to-market change in said predetermined period of time by calculating the difference between one and the division of (i) the sum of said predetermined period of time square

of ineffectiveness by (ii) the square of total deviation. HNG teaches a financial strategy comprising hedging the amount of a security by a swap **(p.2-4 and 6)**. It is common knowledge to take equations, such as those used to calculate differentials and present value, and incorporate the users own numerical values to solve for whatever it is the user is attempting to calculate; therefore, it is inherent that the swap fixed interest rate may be used as the discount rate in calculating present value. Further, calculating present values is commonly used to obtain current values of projected future cash flows; therefore, it is inherent that the present value of each calculation may be made. Interest Rate Swaps teaches equations and techniques used to calculate swaps (p.4-11 and 16-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the hedging securities by a swap, as taught by HNG, into the method disclosed by Falkenstein, as an alternative financial instrument used in the hedging process. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of equations and techniques used to calculate swaps, as taught by Interest Rate Swaps into the method disclosed by Falkenstein, to demonstrate that present value and differential formulas and various numerical values plugged into these equations may be utilized depending upon what the user is attempting to calculate.

Claims 12-14 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falkenstein, HNG, and Interest Rate Swaps as applied to claims 9 and 15 above, and further in view of King.

Falkenstein discloses and HNG and Interest Rate Swaps teach the invention

substantially as claimed; however, neither reference discloses nor teaches the method of compensatory ratio hedging being computer-implemented or a computer readable medium having computer-executable instructions for performing the steps in claim 1. King teaches a computer-implemented apparatus for creating a financial instrument **(col.5, line 59 to col.6, line 11; col.12, lines 5-33; and fig.1: 107)**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a computer-implemented apparatus, as taught by King into the method disclosed by Falkenstein and taught by HNG and Interest Rate Swaps, to provide a computer readable medium capable of carrying out instructions to perform the transactions and calculations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wharton: "The Market Value and Dynamic Interest Rate Risk of Swaps"
Morgan Stanley Dean Witter: "Introduction to Interest Rate Swaps"
Investment Dealers Association of Canada: "Compliance Interpretation Bulletin"

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lalita M Hamilton whose telephone number is (703) 306-5715. The examiner can normally be reached on Tuesday-Thursday (8:30-4:30).

The fax phone number for the organization where this application or proceeding is assigned is (703) 746-6101.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-2272.

LMH

VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600